

NONREIMBURSABLE SPACE ACT AGREEMENT
BETWEEN
THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
AND UNIVERSITY OF PENNSYLVANIA
FOR UTILIZING NASA'S TECHNOLOGY TRANSFER UNIVERSITY (T2U)
PROGRAM FOR DISSEMINATION OF GODDARD'S TECHNOLOGY TRANSFER
PORTFOLIO.

ARTICLE 1. AUTHORITY AND PARTIES

In accordance with the National Aeronautics and Space Act (51 U.S.C. § 20113(e)), this Agreement is entered into by the National Aeronautics and Space Administration Goddard Space Flight Center, located at 8800 Greenbelt Road, Greenbelt, Maryland 20771 (hereinafter referred to as "NASA" or "NASA GSFC") and University of Pennsylvania, Wharton School of Business located at 3620 Locust Walk, 3456 SH-DH, Philadelphia, PA 19104-6365 (hereinafter referred to as "Partner" or "UPENN"). NASA and Partner may be individually referred to as a "Party" and collectively referred to as the "Parties."

ARTICLE 2. PURPOSE

This Space Act Agreement enables collaboration between NASA Goddard Space Flight Center ("Goddard") and the University of Pennsylvania ("Penn"), utilizing the NASA Technology Transfer University (T2U) Program and the Human Research Program. Under this Agreement, Penn will be granted access to NASA's patented technologies portfolio and Goddard personnel on a non-interference basis to conduct commercial studies for educational purposes and student capstone designs. The commercialization studies will serve as research that determines commercial viability of a patented technology. Undergraduate and graduate students will apply government Technology Transfer practices and resources to academic research and projects. Such efforts can also be accelerated by taking advantage of the knowledge base built by NASA engineers.

NASA and Goddard have developed many advanced technologies that have significant commercial potential. This partnership will create unique student learning opportunities and authentic learning experiences related to technology transfer practices. Goddard and/or NASA's technology portfolio will allow students to contribute to NASA's work and to building the pipeline for a diverse future Science, Technology, Engineering, Math, and Health (STEM-H) workforce as part of this NASA Technology Transfer University (T2U) initiative.

WUAC Aerospace Club is a community for students at the University of Pennsylvania to explore business principles in the domain of aerospace. With a direct affiliation with the Wharton Aerospace Community, WUAC aims to prepare those interested in solving consequential business challenges for a career in aerospace and beyond through case competitions, consulting opportunities, networking events, and much more.

Wharton Aerospace is an MBA alumni network boasting nearly 1000 members and a community of senior executives with shared commitments to the commercial aerospace & defense industries. Wharton Aerospace has been conducting by-invitation-only annual conferences on the Wharton campus in Philadelphia and the Wharton campus in San Francisco to foster closer ties between the Wharton School, our Wharton Aerospace participants, and the industrial base.

ARTICLE 3. RESPONSIBILITIES

A. NASA GSFC will use reasonable efforts to:

1. Provide Penn academic programs with access to the NASA Technology Transfer patent portfolio.
2. Assist Penn academic programs and students to select technologies in NASA Technology Transfer patent portfolio that have relevance for ongoing research, academic purposes, or that may achieve potential commercial application through the efforts of the Penn and its students.
3. Provide guidance to Penn in using the licensing process for Goddard and/or NASA technology as appropriate for compelling technologies. Evaluate any licensing requests for NASA technology and enter into such agreements as necessary and appropriate by Penn student based startups. Goddard will provide a timely final determination for all technology transfer decisions.
4. Provide publicly available information on NASA technologies (presentations, papers, FAQs, etc.) to Penn for its students in order to reduce the level of access required to the NASA subject matter experts.
5. Provide access to a database file(s) of the patent portfolio in a scriptable format (.sql, .csv, .xml), containing only publicly available information on NASA technologies, for the purposes of regular expression searching, natural language processing, and/or other methods of patent information discovery.
6. On a non-interference basis, make brief technical consultations available with NASA civil servant subject matter experts and/or innovators in order to further describe and clarify the technical content, operation and potential applications of the provided candidate Goddard technologies. These consultations may take place in the form of phone calls or video meetings. The availability of the subject matter experts and/or innovators and the mode of consultation shall be at the sole discretion and coordinated through the designated Goddard representative.
7. Identify a designated Goddard representative to meet with the designated Penn representative, as deemed necessary by the designated Goddard representative, to discuss technologies for use in the program.
8. Provide an orientation meeting and follow-up meetings to Penn students to explain the process of technology transfer with NASA, as well as an overview of the technology selected.

9. As appropriate, support outreach initiatives aimed at promoting the commercialization of NASA technologies through Penn student-based startups.
10. Provide annual solicitation call information and resources for NASA's SBIR/STTR program, and/or other technology development programs seeking to leverage industry or academic partners.

B. Partner will use reasonable efforts to:

1. Provide comprehensive inputs to Goddard on the desired Goddard and/or NASA technologies that have potential academic or commercial applications for use in the Penn academic programs.
2. Provide copies to Goddard of all projects with use of Goddard technologies, including but not limited to: business plans, commercialization assessments, market assessments, study reports, etc.
3. Provide copies to Goddard of any engineering analysis and design information as relevant to the advancement of Goddard provided technologies.
4. Identify a designated Penn representative to meet with the designated Goddard representative to discuss technologies for use in the program.
5. Engage prospective student startups, technology companies, as well other academic, non-profit, public and private institutions to participate in commercial application of selected Goddard technologies as appropriate.
6. Notify Goddard in the event of any new partners and/or funding for Penn's Technology Transfer programs.
7. Provide any success stories, press releases, social media, etc. for cross-sharing purposes to Goddard representative.
8. Comply with all on-site Goddard regulations and policies concerning conduct while working in collaboration with Goddard.
9. Provide an interim and a final report to NASA Goddard. The inputs will include, but not be limited to: identifying the specific collaborations established under the auspices of this agreement, and providing any new processes developed, data created, lessons learned and recommendations for future implementations of similar agreements.
10. Interim and final reports shall be delivered to the designated Goddard representative.

ARTICLE 4. SCHEDULE AND MILESTONES

The planned major milestones for the activities defined in the "Responsibilities" Article are as follows:

Goddard will schedule an introductory kick-off meeting with Penn stakeholders	Executed date of agreement (EDA) + 30 days
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ARTICLE 5. FINANCIAL OBLIGATIONS

There will be no transfer of funds between the Parties under this Agreement and each Party will fund its own participation. All activities under or pursuant to this Agreement are subject to the availability of funds, and no provision of this Agreement shall be interpreted to require obligation or payment of funds in violation of the Anti-Deficiency Act, (31 U.S.C. § 1341).

ARTICLE 6. PRIORITY OF USE

Any schedule or milestone in this Agreement is estimated based upon the Parties' current understanding of the projected availability of NASA goods, services, facilities, or equipment. In the event that NASA's projected availability changes, Partner shall be given reasonable notice of that change, so that the schedule and milestones may be adjusted accordingly. The Parties agree that NASA's use of the goods, services, facilities, or equipment shall have priority over the use planned in this Agreement. Should a conflict arise, NASA in its sole discretion shall determine whether to exercise that priority. Likewise, should a conflict arise as between two or more non-NASA Partners, NASA, in its sole discretion, shall determine the priority as between those Partners. This Agreement does not obligate NASA to seek alternative government property or services under the jurisdiction of NASA at other locations.

ARTICLE 7. NONEXCLUSIVITY

This Agreement is not exclusive; accordingly, NASA may enter into similar agreements for the same or similar purpose with other private or public entities.

ARTICLE 8. LIABILITY AND RISK OF LOSS

A. Each Party hereby waives any claim against the other Party or one or more of its Related Entities (defined below) for any injury to, or death of, the waiving Party or one or more of its Related Entities, or for damage to, or loss of, the waiving Party's property or the property of its Related Entities arising from or related to activities conducted under this Agreement, whether such injury, death, damage, or loss arises through negligence or otherwise, except in the case of willful misconduct.

B. Partner further agrees to extend this waiver to its related entities by requiring them, by contract or otherwise, to waive all claims against NASA and its Related Entities for injury, death, damage, or loss arising from or related to activities conducted under this Agreement. For purposes of this Agreement, "Related Entities" shall mean contractors and subcontractors of a Party at any tier; grantees, investigators, customers, and users of a Party at any tier and their contractors or subcontractor at any tier; or, employees of the Party or any of the foregoing.

C. Notwithstanding the other provisions of this Article, the waivers of liability set forth in this section shall not be applicable to:

- i. Claims between a Party and its own Related Entity or between its own Related Entities;
- ii. Claims made by a natural person, his/her estate, survivors, or anyone claiming by or through him/her (except when such person or entity is a Party to this Agreement or is otherwise bound by the terms of this waiver) for bodily injury to, or other impairment of health of, or death of, such person;
- iii. Claims for damage caused by willful misconduct;
- iv. Intellectual property claims;
- v. Claims for damage resulting from a failure of a Party to extend the waiver of liability to its Related Entities, pursuant to paragraph B of this Article; or
- vi. Claims by a Party arising out of or relating to another Party's failure to perform its obligations under this Agreement.

ARTICLE 9. INTELLECTUAL PROPERTY RIGHTS - DATA RIGHTS

Information and data exchanged under this Agreement is exchanged without restrictions unless required by national security regulations (e.g., classified information) or as otherwise provided in this Agreement or agreed to by the Parties for specifically identified information or data (e.g., information or data specifically marked with a restrictive notice).

ARTICLE 10. INTELLECTUAL PROPERTY RIGHTS - INVENTION AND PATENT RIGHTS

A. "Related Entity" as used in this Invention and Patent Rights Article means a contractor, subcontractor, grantee, or other entity having a legal relationship with NASA or Partner assigned, tasked, or contracted with to perform activities under this Agreement.

B. The invention and patent rights herein apply to employees and Related Entities of Partner. Partner shall ensure that its employees and Related Entity employees know about and are bound by the obligations under this Article.

C. NASA has determined that 51 U.S.C. § 20135(b) does not apply to this Agreement. Therefore, title to inventions made (conceived or first actually reduced to practice) under this Agreement remain with the respective inventing party(ies). No invention or patent rights are exchanged or granted under this Agreement. NASA and Partner will use reasonable efforts to report inventions made jointly by their employees (including employees of their Related Entities). The Parties will consult and agree on the responsibilities and actions to establish and maintain patent protection for joint invention, and on the terms and conditions of any license or other rights exchanged or granted between them.

ARTICLE 11. USE OF NASA NAME AND NASA EMBLEMS

A. NASA Name and Initials

Partner shall not use "National Aeronautics and Space Administration" or "NASA" in a way that creates the impression that a product or service has the authorization, support, sponsorship, or endorsement of NASA, which does not, in fact, exist. Except for releases under the "Release of General Information to the Public and Media" Article, Partner must submit any proposed public use of the NASA name or initials (including press releases and all promotional and advertising use) to the NASA Associate Administrator for the Office of Communications or designee ("NASA Communications") for review and approval. Approval by NASA Office of Communications shall be based on applicable law and policy governing the use of the NASA name and initials.

B. NASA Emblems

Use of NASA emblems (i.e., NASA Seal, NASA Insignia, NASA logotype, NASA Program Identifiers, and the NASA Flag) is governed by 14 C.F.R. Part 1221. Partner must submit any proposed use of the emblems to NASA Communications for review and approval.

ARTICLE 12. RELEASE OF GENERAL INFORMATION TO THE PUBLIC AND MEDIA

NASA or Partner may, consistent with Federal law and this Agreement, release general information regarding its own participation in this Agreement as desired.

Pursuant to Section 841(d) of the NASA Transition Authorization Act of 2017, Public Law 115-10 (the "NTAA"), NASA is obligated to publicly disclose copies of all agreements conducted pursuant to NASA's 51 U.S.C. §20113(e) authority in a searchable format on the NASA website within 60 days after the agreement is signed by the Parties. The Parties acknowledge that a copy of this Agreement will be disclosed, without redactions, in accordance with the NTAA.

ARTICLE 13. DISCLAIMER OF WARRANTY

Goods, services, facilities, or equipment provided by NASA under this Agreement are provided "as is." NASA makes no express or implied warranty as to the condition of any such goods, services, facilities, or equipment, or as to the condition of any research or information generated under this Agreement, or as to any products made or developed under or as a result of this Agreement including as a result of the use of information generated hereunder, or as to the merchantability or fitness for a particular purpose of such research, information, or resulting product, or that the goods, services, facilities or equipment provided will accomplish the intended results or are safe for any purpose including the intended purpose, or that any of the above will not interfere with privately-owned rights of others. Neither the government nor its contractors shall be liable for special, consequential or incidental damages attributed to such equipment, facilities, technical information, or services provided under this Agreement or such research,

information, or resulting products made or developed under or as a result of this Agreement.

ARTICLE 14. DISCLAIMER OF ENDORSEMENT

NASA does not endorse or sponsor any commercial product, service, or activity. NASA's participation in this Agreement or provision of goods, services, facilities or equipment under this Agreement does not constitute endorsement by NASA. Partner agrees that nothing in this Agreement will be construed to imply that NASA authorizes, supports, endorses, or sponsors any product or service of Partner resulting from activities conducted under this Agreement, regardless of the fact that such product or service may employ NASA-developed technology.

ARTICLE 15. COMPLIANCE WITH LAWS AND REGULATIONS

A. The Parties shall comply with all applicable laws and regulations including, but not limited to, safety; security; export control; environmental; and suspension and debarment laws and regulations. Access by a Partner to NASA facilities or property, or to a NASA Information Technology (IT) system or application, is contingent upon compliance with NASA security and safety policies and guidelines including, but not limited to, standards on badging, credentials, and facility and IT system/application access, including use of Interconnection Security Agreements (ISAs), when applicable.

B. With respect to any export control requirements:

1. The Parties will comply with all U.S. export control laws and regulations, including the International Traffic in Arms Regulations (ITAR), 22 C.F.R. Parts 120 through 130, and the Export Administration Regulations (EAR), 15 C.F.R. Parts 730 through 799, in performing work under this Agreement or any Annex to this Agreement. In the absence of available license exemptions or exceptions, the Partner shall be responsible for obtaining the appropriate licenses or other approvals, if required, for exports of hardware, technical data and software, or for the provision of technical assistance.

2. The Partner shall be responsible for obtaining export licenses, if required, before utilizing foreign persons in the performance of work under this Agreement or any Annex under this Agreement, including instances where the work is to be performed on-site at NASA and where the foreign person will have access to export-controlled technical data or software.

3. The Partner will be responsible for all regulatory record-keeping requirements associated with the use of licenses and license exemptions or exceptions.

4. The Partner will be responsible for ensuring that the provisions of this Article apply to its Related Entities.

C. With respect to suspension and debarment requirements:

1. The Partner hereby certifies, to the best of its knowledge and belief, that it has complied, and shall comply, with 2 C.F.R. Part 180, Subpart C, as supplemented by 2 C.F.R. Part 1880, Subpart C.
2. The Partner shall include language and requirements equivalent to those set forth in subparagraph C.1., above, in any lower-tier covered transaction entered into under this Agreement.

ARTICLE 16. TERM OF AGREEMENT

This Agreement becomes effective upon the date of the last signature below ("Effective Date") and shall remain in effect until the completion of all obligations of both Parties hereto, or two years from the Effective Date, whichever comes first.

ARTICLE 17. RIGHT TO TERMINATE

Either Party may unilaterally terminate this Agreement by providing thirty (30) calendar days written notice to the other Party.

ARTICLE 18. CONTINUING OBLIGATIONS

The rights and obligations of the Parties that, by their nature, would continue beyond the expiration or termination of this Agreement, e.g., "Liability and Risk of Loss" and "Intellectual Property Rights"-related clauses shall survive such expiration or termination of this Agreement.

ARTICLE 19. POINTS OF CONTACT

The following personnel are designated as the Points of Contact between the Parties in the performance of this Agreement.

Management Points of Contact

NASA Goddard Space Flight Center
Darryl R. Mitchell
Chief
8800 Greenbelt Road
Greenbelt, Maryland 20771
Phone: 3012865810
Darryl.r.mitchell@nasa.gov

University of Pennsylvania
Wharton School of Business
Jacqueline Kirtley
Assistant Professor of Management
3620 Locust Walk
2033 SH-DH
Philadelphia, PA 19104-6365
Phone: (215) 898-6502
jkirtley@wharton.upenn.edu

ARTICLE 20. DISPUTE RESOLUTION

Except as otherwise provided in the Article entitled "Priority of Use," the Article entitled "Intellectual Property Rights – Invention and Patent Rights" (for those activities governed by 37 C.F.R. Part 404), and those situations where a pre-existing statutory or regulatory system exists (e.g., under the Freedom of Information Act, 5 U.S.C. § 552), all disputes concerning questions of fact or law arising under this Agreement shall be referred by the claimant in writing to the appropriate person identified in this Agreement as the "Points of Contact." The persons identified as the "Points of Contact" for NASA and the Partner will consult and attempt to resolve all issues arising from the implementation of this Agreement. If they are unable to come to agreement on any issue, the dispute will be referred to the signatories to this Agreement, or their designees, for joint resolution. If the Parties remain unable to resolve the dispute, then the NASA signatory or that person's designee, as applicable, will issue a written decision that will be the final agency decision for the purpose of judicial review. Nothing in this Article limits or prevents either Party from pursuing any other right or remedy available by law upon the issuance of the final agency decision.

ARTICLE 21. MODIFICATIONS

Any modification to this Agreement shall be executed, in writing, and signed by an authorized representative of NASA and the Partner.

ARTICLE 22. ASSIGNMENT

Neither this Agreement nor any interest arising under it will be assigned by the Partner or NASA without the express written consent of the officials executing, or successors, or higher- level officials possessing original or delegated authority to execute this Agreement.

ARTICLE 23. APPLICABLE LAW

U.S. Federal law governs this Agreement for all purposes, including, but not limited to, determining the validity of the Agreement, the meaning of its provisions, and the rights, obligations and remedies of the Parties.

ARTICLE 24. INDEPENDENT RELATIONSHIP

This Agreement is not intended to constitute, create, give effect to or otherwise recognize a joint venture, partnership, or formal business organization, or agency agreement of any kind, and the rights and obligations of the Parties shall be only those expressly set forth herein.

ARTICLE 25. LOAN OF GOVERNMENT PROPERTY

The parties shall enter into a NASA Form 893, Loan of NASA Equipment, for NASA equipment loaned to Partner.

ARTICLE 26. SIGNATORY AUTHORITY

The signatories to this Agreement covenant and warrant that they have authority to execute this Agreement. By signing below, the undersigned agrees to the above terms and conditions.

NATIONAL AERONAUTICS AND
SPACE ADMINISTRATION
GODDARD SPACE FLIGHT
CENTER

UNIVERSITY OF PENNSYLVANIA
WHARTON SCHOOL OF BUSINESS

BY: _____
Christyl Johnson
Associate Director-Office of the
Director

BY: *Jacqueline Kirtley*
Jacqueline Kirtley
Assistant Professor of Management

DATE: _____

DATE: 3/3/2022